Draft Summary of the Environmental Work Group Meeting
Oroville Facilities Relicensing (FERC Project No. 2100)
March 24, 2004

The Department of Water Resources (DWR) hosted a meeting for the Environmental Work Group (EWG) on March 24, 2004 in Oroville.

A summary of the discussion, decisions made, and action items is provided below. This summary is not intended to be a transcript, analysis of the meeting, or to indicate agreement or disagreement with any of the items summarized, except where expressly stated. The intent is to present a summary for interested parties who could not attend the meeting. The following are attachments to this summary:

Attachment 1	Meeting Agenda
Attachment 2	Meeting Attendees
Attachment 3	Revised Resource Action Tracking Matrix, revised 3/20/04
Attachment 4	Narrative Reports: EWG 86A
Attachment 5	Presentation on Scenario 23
Attachment 6	Draft Report SP-G2: Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam, Task 7 – Hydraulic and Sediment Transport Modeling with Fluvial 12
Attachment 7	Presentation on SP-G2, Task 7
Attachment 8	Draft Final Report SP-T2: Project Effects on Special Status Plant Species
Attachment 9	Presentation on SP-T2
Attachment 10	Draft Report SP-W5, Project Effects on Groundwater, Task 1
Attachment 11	Presentation on SP-W5
Attachment 12	Summary of SP-W2 Task Force Meeting
Attachment 13	Interim Report SP-F10, Task 1E: Pre-Spawning Chinook Salmon Migration Patterns and Holding Characteristics

I. Introduction

Attendees were welcomed to the EWG meeting. Attendees introduced themselves and their affiliations. The desired outcomes of the meeting were discussed as listed on the meeting agenda. The meeting agenda and list of meeting attendees are appended to this summary as Attachments 1 and 2, respectively. Rich DeHaven (USFWS) notified the EWG that the Department of Interior Internet server is down and requested that all communications to USFWS be made through hard copies either delivered via fax or surface mail until further notice.

II. Action Items – February 25, 2004 Environmental Work Group Meeting

A summary of the February 25, 2004 EWG meeting is posted on the relicensing web site. The Facilitator reviewed the status of action items from that meeting as follows:

Carry-over

Action Item #E120: Add Hatchery Task Force Resource Actions to the matrix.
Status: Mike Manwaring (MWH) reported that this action is in progress and the resource actions will be entered as soon as the development process is completed.

Action Item #E123: Distribute and post on the web site copies of stressor charts developed by the Flow/Temperature Task Force.

Status: The stressor charts are available on the web site and have been distributed to the EWG.

Action Item #E124: Initiate a panel of experts to review results of PHABSIM and make recommendations to EWG.

Status: The panel has been provided with review materials and we are currently awaiting their response.

Dave Olson (SWRI) asked the status of work at Sunset Pumps and no one had additional information regarding permitting for any work there. The EWG agreed that while the permitting of any alterations to Sunset Pumps is not a relicensing issue, any changes to the facility should be understood as the changes relate to proposed Resource Actions associated with it.

The Modeling Update agenda item was delayed pending arrival of Bill Smith (SWRI).

III. Resource Action Discussion

Task Force Summaries and Next Meetings

Terry Mills (DWR) reported on the March 2nd EWG Task Force meeting and described the flow chart under development by the Task Force and narrative reports discussed. Woody Elliott (DPR) expressed concern that he was not notified of the Task Force meeting and requested copies of the terrestrial narrative reports discussed. Gail Kuenster (DWR) will send copies to Woody.

Dave Olson described discussions at the March 16th EWG Fish Passage Task Force meeting. Preliminary comments on the F15 model were discussed and deliverables identified. Dave also noted that the Task Force discussed technical evaluation guidelines for index water temperature values. Terry described a comments tracking table under development to organize comments received and to confirm a mutual understanding of the comments. He explained that some include notes indicating a change to the model and added that placeholders are being used to identify areas were costs remain unknown. The next EWG Fish Passage Task Force meetings are scheduled for March 29th and April 29th at SWRI in Sacramento from 9:30am to 3:00 pm. Terry Mills noted that DWR and NOAA Fisheries management have also met recently as part of the ESA consultation process.

Brad Cavallo (DWR) reported that the Hatchery Task Force would next meet on March 25th at SWRI in Sacramento. They will discuss further development of hatchery resource actions and receive updates on Study Plan F9 and the IHN study.

Task Forces Meeting Schedule

Hatchery	March 25, 2004	9am – 3pm	SWRI
Fish Passage	March 29, 2004	9am – 3pm	SWRI
EWG	April 28, 2004	9am – 4pm	OFD
Fish Passage	April 29, 2004	9am – 3pm	SWRI
Modeling Workshop	April 30, 2004	9am – 5pm	Sacramento

Updated Tracking Matrix and Flow Chart

Mike Manwaring distributed an updated version of the tracking matrix (Attachment 3) and asked the EWG to review and provide comments back to the task forces. He explained that there have been few changes this month adding that the proposed resource actions under development by the Hatchery Task Force would be added when completed. Terry Mills

explained that this version is similar to the matrix he shared with the Plenary Group at their March meeting and he noted the columns that had been eliminated from their version for clarity. He also described the flow charts that were used to explain the progress that the EWG has made in identifying and describing proposed resource actions. DWR will post the handouts provided to the Plenary Group on the Project web site. The Plenary Group has not provided feedback but expects another presentation from the EWG at their May meeting.

Resource Action Narrative Reports

Jerry Boles (DWR) distributed and described EWG86A (Attachment 4) related to recreation area water quality monitoring and improvement. He described swim areas that have tested with high bacterial counts and noted that this resource action included a public notification component when bacteria levels get too high. The EWG discussed potential effects of swim area restrictions and the role of wildlife in high bacteria levels as well as the dual purpose of the wildlife area to provide recreation opportunities that are consistent with wildlife management efforts. The EWG discussed the difference between bacteria and the potential to discourage wildlife use in high recreational use areas. Woody Elliott suggested that DPR and DWR get together to discuss this issue and clarify a course of action to determine the level of public risk and appropriate next steps. He suggested the monthly Oroville Recreation Coordinating Agencies (ORCA) meeting would be a good place to start the dialogue. Sharon Stohrer (SWRCB) suggested the Regional Board and the County Health Advisor also be involved in the discussion. The EWG agreed this resource action is a Category 2.

IV. Modeling Update

Curtis Creel (DWR) reminded the EWG that the next Modeling Work Shop would be held in Sacramento at the Department of Aging, 1600 K Street on April 30th from 9am-5pm. The modeling team will provide updates on the temperature control actions and future conditions. Flattening out generation by eliminating peaking is being factored into the benchmark scenarios.

Bill Smith (SWRI) provided a presentation on Scenario 23 designed to help focus the work in identifying temperature targets downstream of the Project facilities (Attachment 5). He explained that the exercise was qualitative to bring operational reality to the potential biological criteria. He reported that the river water temperature is affected more by meteorological conditions than by flow volumes. He explained that the exercise indicates the temperature can either be controlled within acceptable temperatures at the upper end of the system and allowed to fluctuate downstream or a target temperature can be set downstream that require temperatures to be too cold upstream. He also pointed out that in an attempt to lower water temperatures early in the season in response to a warm period, too much cold water could be released, thereby affecting the amount of cold water available for temperature modification later in the year.

The EWG briefly discussed the potential to construct a canal to bypass the Afterbay and deliver colder water to the Feather River near the existing Afterbay Outlet while increasing the residence time and temperature of the water in the Afterbay for irrigation delivery. Curtis Creel suggested that the Engineering and Operations (E&O) WG identified the need for further feasibility study for canal construction including the potential impacts to vernal pools and ESA species habitat. He added that the biological temperature targets and locations should be identified before further investigation on a bypass canal. He indicated that the E&OWG is continuing to investigate other potential actions that might achieve the same goal of temperature reduction downstream and temperature increases. Sharon Stohrer asked if a submerged pipeline had been considered but Curtis pointed out that the size needed to accommodate the flow would be huge. However, Curtis explained that the E&O WG is looking at other options

such as the potential to route the water within the Afterbay using a series of driven sheet piles that would act like baffles to direct the flow and increase residence time for irrigation water. The EWG discussed several other potential options to consider. Curtis Creel said the E&O WG would continue to consider options and the E&O WG write-ups would be posted on the web site. Ted Alvarez will distribute them to the EWG electronically.

Eric Theiss (NOAA) asked if there was a cutoff date for studies. The EWG discussed the schedule for remaining study results and the use of best available information in decision-making. Terry Mills noted that the Plenary Group received a handout outlining the target dates for remaining studies and agreed to distribute it to the EWG. Wayne Dyok reminded the EWG that many important results are still to come and the iterative nature of the modeling process requires a linear approach where the next steps are determined by results of the previous steps.

V. Fish Passage Field Trip Report

Dave Olson reported on a field trip conducted the previous day to provide preliminary feedback on the locations for gulper and screen systems within the tributaries to Lake Oroville. Dennis Dorratcague (MWH) participated in the field trip to provide his expertise and experience with the construction, operation and maintenance activities associated with the gulper system in place at Baker Lake, Washington. Dennis provided a photo presentation of the trip and described his initial findings. He identified issues related to the large lake level fluctuations experienced at Lake Oroville, high water velocities and narrow canyon topography. The EWG discussed the issue of adequate access and the need to minimize the number of transfers for transported fish. Dennis noted that the existing log booms would not be adequate to deal with the debris in this system and this could be a significant problem to solve.

The EWG discussed the various components of the gulper system at Baker Lake. Dennis described the water velocities into the gulper as very low and explained that the system uses guide nets instead of screens. He explained that the ¼ inch mesh nets at the Baker Lake facility reach to the substrate because they found that the coho and sockeye salmon in that system would go to the bottom to avoid the net. The EWG discussed the relationship of mesh size to algae build-up and Dennis indicated that algae removal is a big problem at Baker Lake and is part of regular maintenance activities.

The EWG discussed attraction velocities and other specific issues such as predator take in front of the gulper. The EWG discussed if bass would enter the gulper and the potential to electroshock selectively to remove unwanted species. Dennis described the power needs to operate the pumps and the need to insulate for sound and vibration to avoid adversely affecting the fish behavior. The EWG also discussed the potential to power the gulper with diesel and to construct the facility as a boat-in only operation. Based on his experience and the field visit, Dennis suggested that the West Branch did not look like a good location for a gulper and while Big Bend Dam on the North Fork may have fish screening potential, it is very isolated and would require significant access upgrades. He added that a mobile gulper system is not practical because it takes a week to set up the net. He discussed standard maintenance needs for pumps and screens or nets and reiterated that during the November through May emigration time that the gulper would be operated at Oroville, the high flows would exacerbate the debris problem.

Eric Theiss asked Dennis if he saw anything that made the fish passage gulper proposal infeasible. Dennis responded that the construction and operation of a gulper system in the Lake Oroville situation would be very difficult due to the lake level fluctuations and costly due to power and access needs but it would not be impossible to construct. Eric then requested a full

fish passage feasibility study similar to the study conducted by the Army Corps of Engineers for Cougar Lake. Chuck Hanson (SWC) asked how the feasibility study would relate to F15. Eric suggested that the scope of F15 isn't broad enough to evaluate habitat upstream of Big Bend Dam. He suggested that the upstream licenses would be re-opened by NOAA once fish are passed by Oroville Dam and added that he wants the feasibility study to include all four forks of the Upper Feather River. Terry Mills reiterated the process that the EWG has been following regarding fish passage and suggested that upper management at NOAA and DWR agreed to that process. Eric concurred. Terry suggested that the Cougar Lake study be added to the EWG Fish Passage Task Force agenda for the March 29th meeting.

VI. Study Deliverables and Implementation Updates

Reports

SP-G2, Task 7

Koll Buer (DWR) provided copies of the draft report SP-G2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam, Task 7 – Hydraulic and Sediment Transport Modeling with Fluvial 12 (Attachment 6) and provided a presentation (Attachment 7). He described the model development and calibration methodology and the resulting sediment transport model. The Feather River system sediments have become coarser over time and the system is no longer recruiting large woody debris although the farmers downstream routinely dump orchard cuttings and trees into the high flow channel. Koll reminded the EWG to provide comments within 30 days.

SP-T2

Gail Kuenster (DWR) provided copies of SP-T2 Project Effects on Special Status Plant Species Draft Final Report (Attachment 8) and provided a presentation (Attachment 9). She reported that no state or federally listed species were found within the study area during the 2002 and 2003 surveys. Seventeen special status species were found within the study area. Chuck Hanson suggested that the recommendations section could be expanded to include potential actions that could be taken to improve habitat.

SP-W5, Task 1

Perry LeBeouf (DWR) provided a draft report on SP-W5, Project Effects on Groundwater, Task 1 (Attachment 10) and provided a presentation (Attachment 11). He reported that both shallow and deep groundwater wells were sampled and results suggest no adverse effects to groundwater quantity or quality from operation of the Thermalito Forebay or Afterbay. Chuck Hanson suggested the summary section be revised to clarify the hypothesis that the project operation may have a beneficial impact.

SP-W2

Jerry Boles (DWR) distributed a summary of the SP-W2 Task Force meeting held on March 1st, 2004 to discuss the next steps for contaminant study (Attachment 12). He reported that the Task Force recommended the sediment samples be analyzed for all sample sites, additional fish analysis be conducted, and mercury sampling within the water flowing into Lake Oroville. The EWG discussed the expected turn around time for lab work of this nature. Sharon Stohrer added for clarification that the task force discussed the summary table that she prepared for the meeting, and that Jerry included in the presentation, and that the question marks have been resolved and should be ignored. Jerry also reported that the task force wanted to add bird eggs to the analysis but that he needed to discuss this further with the members since Dave Bogener, DWR's wildlife biologist, indicated that birds migrate to other countries and that the source of contaminants may not be easily identified. Dave Bogener also added that egg collection would need a DFG permit.

SP-F10, Task 1E
Brad Cavallo distributed the Interim Report on Pre-Spawning Chinook Salmon Migration Patterns and Holding Characteristics, SP-F10, Task 1E (Attachment 13). No formal presentation of this report was provided at the EWG meeting.

VII. Next Steps

The participants agreed that the next EWG meeting would focus primarily on the review of narrative reports and study reports. The next EWG meeting is:

Date: April 28, 2004
Time: 9:00 a.m. – 4:00 p.m.
Location: Oroville Field Division

Action Items

The following action items identified by the EWG includes a description of the action, the participant responsible for the action, and due date.

Action Item #E125: Provide copies of the terrestrial narrative reports to Woody Elliott (DPR).
Responsible: DWR
Due Date: April 28, 2004

Action Item #E126: Distribute and post E&O WG EO1 write-up.
Responsible: DWR
Due Date: April 20, 2004

Action Item #E127: Distribute and post Plenary Group document identifying target dates for remaining reports.
Responsible: DWR
Due Date: April 28, 2004

Action Item #E128: Add review and discussion of Cougar Lake study to EWG F15 Task Force agenda for March 29th meeting.
Responsible: DWR
Due Date: March 29, 2004